

# PLENTICORE plus

with battery



Technical Specification

# PLENTICORE plus



PLENTICORE plus power class		3.0	4.2	5.5	7.0	8.5	10	
Input side (DC)	Max. PV power (cos $\varphi = 1$ )	kWp	4,5	6,3	8,25	10,5	12,75	15
	Nominal DC power	kW	3,09	4,33	5,67	7,22	8,76	10,31
	Input voltage range ( $U_{DCmin} - U_{DCmax}$ )	V	120...1000					
	MPP working voltage range ( $U_{MPPworkmin} - U_{MPPworkmax}$ )	V	120...720					
	Number of DC inputs		3					
	Number of combined DC inputs (PV or battery)		1					
	Number of independent MPP trackers		3					
	DC 3 – battery input optional - Activation code battery available at: <a href="http://shop.kostal-solar-electric.com">shop.kostal-solar-electric.com</a>							
	Working voltage for battery input ( $U_{DCworkbatmin} - U_{DCworkbatmax}$ )	V	120...650					
	Max. charging current/discharging current at battery input	A	13/13					
Output side (AC)	Rated power, cos $\varphi = 1$ ( $P_{AC,r}$ )	kW	3,0	4,2	5,5	7,0	8,5	10
	Output voltage ( $U_{ACmin} - U_{ACmax}$ )	V	320...500					
	Rated output current ( $I_{AC,r}$ )	A	4,33	6,06	7,94	10,10	12,27	14,43
	Max. output current ( $I_{ACmax}$ )	A	4,81	6,74	8,82	11,23	13,63	16,04
	Grid connection		3N~, 230/400 V, 50 Hz					
	Standby	W	7,9					
$\eta$	Max. efficiency	%	97,1	97,1	97,1	97,2	97,2	97,2
	European efficiency	%	95,3	96,5	96,2	96,5	96,5	96,5
System data	Protection class according to IEC 60529		IP 65					
	Height/width/depth	mm	563 / 405 / 233					
	Weight	kg	19,6			21,6		
	Ambient temperature	°C	-20...60					
	Connection technology, DC side		SUNCLIX plug					
Directives/Certification <sup>1)</sup>		CE, GS, CEI 0-21, CEI10/11, EN 62109-1, EN 62109-2, EN 60529, EN 50438*, EN 50549-1*, NA/EEA, G98, G99, IFS2018, IEC 61727, IEC 62116, RD 1699, RFG, TF3.3.1, TOR Erzeuger, UNE 206006 IN, UNE 206007-1 IN, UTE C15-712-1, VDE 0126-1-1, VDE-AR-N 4105, VJV2018						

Subject to technical changes. Errors excepted. You can find current information at [www.kostal-solar-electric.com](http://www.kostal-solar-electric.com).

<sup>1)</sup> Does not apply to all national annexes

## PLENTICORE plus with AXITEC AXIStorage Li SV1/SV2



AXITEC AXIStorage Li SVx		SV1 10.1 <sup>2)</sup>	SV1 13.5 <sup>2)</sup>	SV1 16.9 <sup>2)</sup>	SV1 20.2 <sup>2)</sup>	SV1 23.6 <sup>2)</sup>	SV2 6.7 <sup>3)</sup>	SV2 10.1 <sup>3)</sup>	SV2 13.5 <sup>3)</sup>		
System data	Module type	Li-Ion LFP 3.552 kWh, 48 V, 74 Ah, 36 kg					Li-Ion LFP 3.552kWh, 96V, 37Ah, 35kg				
	Max. Power consumption in connection with PLENTICORE plus 3.0-10 <sup>1)</sup>	kW	1.87	2.50	3.12	3.74	4.37	2.50	3.74	4.99	
	Usable capacity 95%/100% DoD <sup>2)</sup>	kWh	10.1/ 10.65	13.5/ 14.20	16.9/ 17.76	20.2/ 21.31	23.6/ 24.86	6.7/ 7.10	10.1/ 10.65	13.5/ 14.20	
	Number of battery modules		3	4	5	6	7	2	3	4	
	Nominal voltage	V	144	192	240	288	336	192	288	384	
	Voltage range	V	130.5- 162	174- 216	217.5- 270	261- 324	304.5- 378	174- 216	261- 324	348- 432	
	Interface to inverter		RS485								
	Height	mm	700	870	1040	1210	1380	822	1118	1414	
	Width/depth	mm	600/380					450/296			
	Weight	kg	122	158	194	230	266	82	117	152	
	Ambient temperature	°C	-0...50								
	IP protection class		IP 55								
	Certification / Safety Standard		VDE2510-50, IEC62619, IEC62477-1, IEC62040-1, CEC, CE, UN38.3								
	EMC		EN 61000-6-2, EN 61000-6-3								

<sup>1)</sup> Depending on the max. Rated power AC of the inverter (PLENTICORE plus 3.0 max. 3.0 kW), <sup>2)</sup> According to the battery manufacturer, <sup>3)</sup> Axitec AXIStorage Li SV1 battery compatible with BMS module: Li SV1 BMS with article number: AY10785, <sup>4)</sup> Axitec AXIStorage Li SV2 battery compatible with BMS module: Li SV2 BMS with article number: AY10786

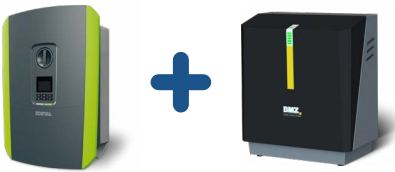
## PLENTICORE plus with AXITEC AXIStorage Li SH



BMZ HYPERION		3 Modules	4 Modules	5 Modules	6 Modules	
System data	Max. Power consumption in connection with PLENTICORE plus 3.0-10 <sup>1)</sup>	kW	2.0	2.7	3.4	4.0
	Energy content / Usable capacity <sup>2)</sup>	kWh	9.7/7.5	12.9/10	16.1/12.5	19.3/15
	Usable capacity with PLENTICORE plus 95% DoD <sup>3)</sup>	kWh	7.1	9.5	11.9	14.3
	Number of battery modules		3	4	5	6
	Battery type		Li-Ion NMC			
	Nominal voltage	V	155	207	258	310
	Voltage range	V	134...170	179...227	224...284	268...340
	Interface to inverter		RS485			
	Width/height/depth	mm	751/870/423			
	Weight	kg	107	129	151	173
	Ambient temperature	°C	0...45			
IP protection class		IP 21				
Certification / Safety Standard		CE / UN 38.3 / IEC 62619				

<sup>1)</sup> Depending on the max. rated power AC of the inverter (3.0 max. 3.0 kW), <sup>2)</sup> According to the battery manufacturer, <sup>3)</sup> 95% of the usable capacity according to the battery manufacturer

# PLENTICORE plus with BMZ HYPERION



BMZ HYPERION		3 Modules	4 Modules	5 Modules	6 Modules	
System data	Max. Power consumption in connection with PLENTICORE plus 3.0-10 <sup>1)</sup>	kW	2.0	2.7	3.4	4.0
	Energy content / Usable capacity <sup>2)</sup>	kWh	9.7/7.5	12.9/10	16.1/12.5	19.3/15
	Usable capacity with PLENTICORE plus 95% DoD <sup>3)</sup>	kWh	7.1	9.5	11.9	14.3
	Number of battery modules		3	4	5	6
	Battery type		Li-Ion NMC			
	Nominal voltage	V	155	207	258	310
	Voltage range	V	134...170	179...227	224...284	268...340
	Interface to inverter		RS485			
	Width/height/depth	mm	751/870/423			
	Weight	kg	107	129	151	173
	Ambient temperature	°C	0...45			
	IP protection class		IP 21			
	Certification / Safety Standard		CE / UN 38.3 / IEC 62619			

<sup>1)</sup> Depending on the max. rated power AC of the inverter (3.0 max. 3.0 kW), <sup>2)</sup> According to the battery manufacturer, <sup>3)</sup> 95% of the usable capacity according to the battery manufacturer

# PLENTICORE plus with BYD Battery-Box Premium HVS/HVM



BYD Battery-Box Premium		HVS 5.1	HVS 7.7	HVS 10.2	HVS 12.8	HVM 11.0	HVM 13.8	HVM 16.6	HVM 19.3	HVM 22.1	
System data	Module type	HVS (High Voltage Small) 2.56 kWh, 102.4 V, 25 Ah, 38 kg, LiFePO <sub>4</sub>				HVM (High Voltage Medium) 2.76 kWh, 51.2 V, 53 Ah, 38 kg, LiFePO <sub>4</sub>					
	Max. Power consumption in connection with PLENTICORE plus 3.0-10 <sup>1,2,3)</sup>	kW	2.66	3.99	5.32	6.5	2.66	3.3	3.99	4.66	5.32
	Usable capacity 95%/100% DoD <sup>4)</sup>	kWh	4.86/ 5.12	7.30/ 7.68	9.73/ 10.24	12.16/ 12.8	10.49/ 11.04	13.11/ 13.8	15.73/ 16.56	18.35/ 19.32	20.98/ 22.08
	Number of battery modules		2	3	4	5	4	5	6	7	8
	Nominal voltage	V	204	307	409	512	204	256	307	358	409
	Voltage range	V	160- 240	240- 360	320- 480	400- 600	160- 240	200- 300	240- 360	280- 420	320- 480
	Interface to inverter		RS485								
	Height	mm	712	945	1178	1411	1178	1411	1644	1877	2110
	Width/depth	mm	585/298								
	Weight	kg	91	129	167	205	167	205	243	281	319
	Ambient temperature	°C	-10...50								
	IP protection class		IP 55								
	Certification / Safety Standard		VDE2510-50 / IEC62619 / CEC / CE / UN38.3								

<sup>1)</sup> The use of the BYD Battery-Box Premium HVM 13.8, 16.6, 19.3 and 22.1 are not approved for the PLENTICORE plus 3.0

<sup>2)</sup> Depending on the max. Rated power AC of the inverter (PLENTICORE plus 3.0 max. 3.0 kW, 4.2 max 4.2 kW and 5.5 max 5.5 kW)

<sup>3)</sup> Using the BYD Battery-Box Premium HVM 11.0 or 13.8 is technically possible. Due to the relatively low battery voltage of these variants, a restriction of the charging and final charging power ( $U_{Ba} \times 13A$  max. Input current of the WR) and the system efficiency must be pointed out.

<sup>4)</sup> Test Conditions: 0,2 C charge and discharge at +25 °C, real usable capacity with PLENTICORE plus system / theoretically usable capacity acc. BYD battery data sheet at 100% DoD

## PLENTICORE plus with Dyness Tower



Dyness Tower		T7	T10	T14	T17	
System data	Module type	Li-Ion LFP 3.552 kWh, 96 V, 37 Ah, 41 kg				
	Max. Power consumption in connection with PLENTICORE plus 3.0-10 <sup>1)</sup>	kW	2.5	3.7	4.9	6.2
	Usable capacity 95%/100% DoD <sup>2)</sup>	kWh	6.7/7.1	10.2/10.7	13.5/14.2	16.9/17.8
	Number of battery modules		2	3	4	5
	Nominal voltage	V	192	288	384	480
	Voltage range	V	168-219	252-328	336-438	420-547
	Interface to inverter		RS485			
	Height	mm	700	900	1100	1300
	Width/depth	mm	504/380			
	Weight	kg	105	146	187	228
	Ambient temperature	°C	-0...50			
	IP protection class		IP54			
	Certification / Safety Standard		IEC 62040-1, IEC 62619, IEC 63056, UL 1973, CE			
	EMC		EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4			

<sup>1)</sup> Depending on the max. Rated power AC of the inverter (PLENTICORE plus 3.0 max. 3.0 kW), <sup>2)</sup> According to the battery manufacturer

## PLENTICORE plus with LG RESU FLEX



LG Energy Solution		RESU FLEX 8.6	RESU FLEX 12.9	RESU FLEX 17.2	
System data	Module type	Li-Ion NMC, BMA 48.9 kg <sup>3)</sup> , BPU 16.5 kg <sup>3)</sup>			
	Max. Power consumption in connection with PLENTICORE plus 3.0-10 <sup>1)</sup>	kW	3.45	5.18	6.50
	Usable capacity 95%/100% DoD <sup>2)</sup>	kWh	8.17/8.60	12.26/12.90	16.34/17.20
	Number of battery modules		2	3	4
	Voltage range	V	192-265.6	288-398.4	384-531.2
	Interface to inverter		RS485		
	Height/Wight	mm	665,2/665,2		
	Depth	mm	445.2	593.6	742
	Weight	kg	114.3	163.2	212.1
	Operating temperature	°C	-10...50		
	IP protection class		IP 55		
	Certification / Safety Standard		CE, RCM, UL1973, IEC62619, IEC62477-1		
	EMC		FCC, IEC61000-6-1, IEC61000-6-2, IEC61000-6-3		

<sup>1)</sup> Depending on the max. Rated power AC of the inverter (PLENTICORE plus 3.0 max. 3.0 kW), <sup>2)</sup> According to the battery manufacturer, <sup>3)</sup> The weight of the bracket and design cover is not included.

# PLENTICORE plus with PYLONTECH Force-H1/H2



PYLONTECH Force		H1-V2 10.65 <sup>3)</sup>	H1-V2 14.20 <sup>3)</sup>	H1-V2 17.76 <sup>3)</sup>	H1-V2 21.31 <sup>3)</sup>	H1-V2 24.86 <sup>3)</sup>	H2-V2 7.10 <sup>4)</sup>	H2-V2 10.65 <sup>4)</sup>	H2-V2 14.21 <sup>4)</sup>		
System data	Module type	Li-Ion LFP 3.552 kWh, 48 V, 74 Ah, 36 kg					Li-Ion LFP 3.552kWh, 96V, 37Ah, 35kg				
	Max. Power consumption in connection with PLENTICORE plus 3.0-10 <sup>1)</sup>	kW	1.87	2.50	3.12	3.74	4.37	2.50	3.74	4.99	
	Usable capacity 95%/100% DoD <sup>2)</sup>	kWh	10.1/ 10.65	13.5/ 14.20	16.9/ 17.76	20.2/ 21.31	23.6/ 24.86	6.7/ 7.10	10.1/ 10.65	13.5/ 14.21	
	Number of battery modules		3	4	5	6	7	2	3	4	
	Nominal voltage	V	144	192	240	288	336	192	288	384	
	Voltage range	V	130.5- 162	174- 216	217.5- 270	261- 324	304.5- 378	174- 216	261- 324	348- 432	
	Interface to inverter		RS485								
	Height	mm	700	870	1040	1210	1380	822	1118	1414	
	Width/depth	mm	600/380					450/296			
	Weight	kg	122	158	194	230	266	82	117	152	
	Ambient temperature	°C	-0...50								
	IP protection class		IP 55								
	Certification / Safety Standard		VDE2510-50, IEC62619, IEC62477, IEC62040, UN38.3, CE								
	EMC		EN 61000-6-2, EN 61000-6-3								

<sup>1)</sup> Depending on the max. Rated power AC of the inverter (PLENTICORE plus 3.0 max. 3.0 kW), <sup>2)</sup> According to the battery manufacturer, <sup>3)</sup> Pylontech Force-H1-V2 battery compatible with BMS modul: FC0500-40S-V2 mit article number 11FC0500ZZA-00013, <sup>4)</sup> Pylontech Force-H2-V2 battery compatible with BMS modul: FC0500M-40S-V2 mit article number 11FC0500MZA-00013

